Attorney's Docket No.: 06275-421US1 / 100691-1P US

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## Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

## **Listing of Claims:**

- 1. (Original) A method for the detection of a polymorphism in OATP8 in a human which method comprises:
- (i) determining the sequence of the human at any one of the following positions:

positions 743, 811, 2021 and 2380 of SEQ ID NO: 16;

positions 233 and 256 of SEQ ID NO: 17; or

(ii) determining the sequence of the human, wherein the human is a Caucasian human, at any one of the following positions:

positions 389, 410 and 389-392 of SED ID NO: 15; positions 378, 1877 and 2501-2505 of SEQ ID NO: 16; position 112 of SEQ ID NO: 17.

2. (Original) A method according to claim 1 wherein the polymorphism is further defined as:

polymorphism at position 389 is presence of A and/or T;
polymorphism at position 410 is presence of T and/or A;
polymorphism at position 389-392 is presence of ATAT and/or TAGA;
polymorphism at position 743 is presence of A and/or G;
polymorphism at position 811 is presence of G and/or C;
polymorphism at position 2021 is presence of G and/or A;
polymorphism at position 2380 is presence of A and/or T;
polymorphism at position 378 is presence of G and/or T;

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polymorphism at position 1877 is presence of A and/or G; polymorphism at position 2501-2505 is presence of AAAAA and/or AAAAAA; polymorphism at position 233 is presence of Ile and/or Met; polymorphism at position 256 is presence of Gly and/or Ala; and polymorphism at position 112 is presence of Ser and/or Ala.

- 3. (Currently amended) A method according to claim 1-or-2 wherein the method for detection of a nucleic acid polymorphism is selected from amplification refractory mutation system and restriction fragment length polymorphism.
- 4. (Currently amended) Use of a method defined in-any of claims 1-3 claim 1 to assess the pharmacogenetics of a drug transportable by OATP8.
- 5. (Original) A polynucleotide comprising at least 20 contiguous bases of the human OATP8 gene and comprising an allelic variant selected from any of the following:

Region	variant	Position
Exon 6	G	743 (SEQ ID NO: 16)
Exon 7	С	811 (SEQ ID NO: 16)
Exon 14	A	2021 (SEQ ID NO: 16)
3' UTR	T	2380 (SEQ ID NO: 16)

- 6. (Original) An allele specific primer capable of detecting an OATP8 gene polymorphism at one of the following positions: positions 389, 410 and 389-392 of SEQ ID NO: 15; positions 743, 811, 2021, 2380, 378, 1877 and 2501-2505 of SEQ ID NO: 16.
- 7. (Original) An allele specific oligonucleotide probe capable of detecting a OATP8 gene polymorphism at one of the following positions: positions 389, 410 and 289-392 of SEQ ID NO: 15; positions 743, 811, 2021, 2380, 378, 1877 and 2501-2505 of SEQ ID NO: 16.

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8. (Currently amended) A diagnostic kit comprising an allele specific oligonucleotide probe of claim 7 and/or an the allele-specific primer of claim 6.

- 9. (Original) A method of treating a human in need of treatment with a drug transportable by OATP8 in which the method comprises detection of a polymorphism in OATP8 in a human, which method comprises:
- (i) determining the sequence of the human at one of the following positions:

positions 743, 811, 2021, 2380 of SEQ ID NO: 16;

positions 233 and 256 of SEQ ID NO: 17; or

determining the sequence of the human, wherein the human is a Caucasian human, at one of the following positions:

positions 389,410 and 389-392 of SEQ ID NO: 15;

positions 378, 1877 and 2501-2505 of SEQ ID NO: 16;

position 112 of SEQ ID NO: 17; and

- ii) administering an effective amount of the drug.
- 10. (Original) Use of a drug transportable by OATP8 in preparation of a medicament for treating a disease in a human determined as having a polymorphism at one of the following positions:

positions 389, 410 and 389-392 of SEQ ID NO: 15; positions 743, 811, 2021, 2380, 378, 1877 and 2501-2505 of SEQ ID NO: 16;

positions 233, 256 and 112 of SEQ ID NO: 17.

11. (Original) An allelic variant of human OATP8 polypeptide comprising:

a methionine at position 233 of SEQ ID NO: 17;

an alanine at position 256 of SEQ ID NO: 17;

an alanine at position 112 of SEQ ID NO: 17;

or a fragment thereof comprising at least 10 amino acids provided that the fragment comprises the allelic variant at position 233, 256 or 112 of SEQ ID NO: 17.

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12. (Original) An antibody specific for an allelic variant of human OATP8 polypeptide as described herein having:

a methionine at position 233 of SEQ ID NO: 17;

an alanine at position 256 of SEQ ID NO: 17;

an alanine at position 112 of SEQ ID NO: 17;

or a fragment thereof comprising at least 10 amino acids provided that the fragment comprises the allelic variant at position 233, 256 or 112 of SEQ ID NO: 17.

- 13. (Original) A diagnostic kit comprising an antibody of claim 12.
- 14. (New) A diagnostic kit comprising the allele specific oligonucleotide probe of claim 7.